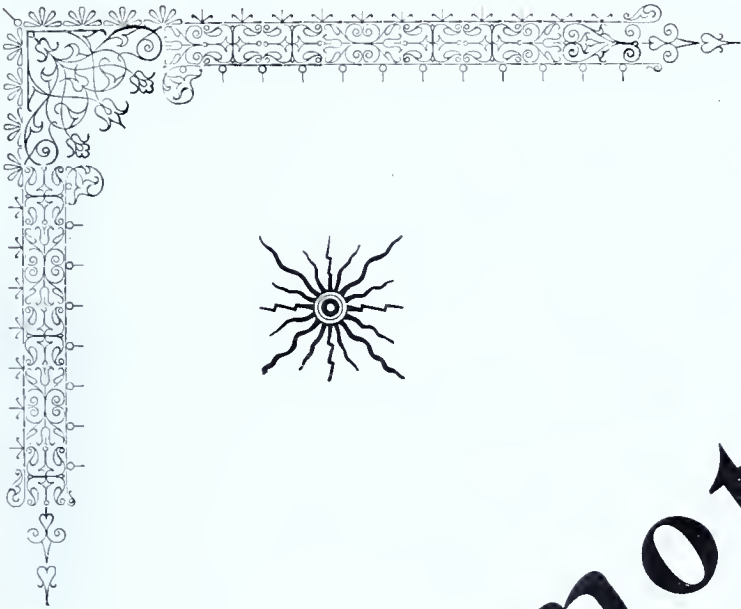


On the

# Louisville & Nashville Railroad.

From GEORGE L. CROSS  
North-Western Passenger Agent  
Louisville & Nashville R. & P.,  
CHICAGO, ILL.



# Mammoth Cave

By Flash=Light.



Reprinted from Demorest's Family Magazine.



Y. Van den Berg,  
Traffic Manager.

Louisville, Ky.

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THE "D" OF THE CORPS" AT THE MOUTH OF THE CAVE.



# DEMOREST'S

## FAMILY MAGAZINE.

No. CCCXLVIII.

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### MAMMOTH CAVE BY FLASH-LIGHT.\*

**W**HEN the fascinating project of throwing a new light on the Mammoth Cave was first suggested to me I was charmed.—not only by the anticipation of a weird and unusual adventure, but I felt confident that, profiting by the experience of others, many difficulties surrounding the undertaking might be smoothed away.

Kentucky's subterranean wonder has been world-famous for nearly a century; so it was seemingly a simple matter to find any number of people, among an average acquaintance, who might have explored its depths. Nothing of the sort. People who had been to the Mammoth Cave did not seem to exist within my horizon, and the attempt to gather information at long range was a signal failure.

Since visiting the cave, and learning from the hotel register that thousands of tourists come to the great cavern annually, I have been absorbed by the elusive problem of what becomes of these thousands *afterwards*. Nobody seems to meet them in the world outside, and they certainly do not stay *inside*, for the guides are very careful to see that everybody who goes in, comes out again. Like the unfathomable riddle of the pins, Where do they go to? I never seemed to find them. The chances

are, that, being necessarily limited in my field of inquiry to one or two continents, I did not reach the right places or ask the right persons; for, later, I made the amusing discovery that out of half a dozen visitors to the cave, whom I met there for the first time, number one had for years lived around the corner from me in my own town, number two was from New Zealand, number three, from Alabama, number four, from a small coast-town in Scotland, number five, from Chicago, while number six was a resident of British Honduras! Eventually I ran across some few people who had actually seen Mammoth Cave; but they were rare indeed, with little practical knowledge to impart. Wearying of indirect methods, I found a happy solution of the difficulty in a brief but felicitous correspondence with the management, and was soon *en route* to the South, in a season of brilliant Indian summer weather.

The Louisville and Nashville Railroad is the only direct



MAMMOTH CAVE HOTEL.

\* The fine pictures accompanying this article are from photographs made especially for us by the author, who is to be congratulated on making one of the greatest successes in flash-light pictures ever achieved. They are really wonderful, depicting many scenes which it has heretofore been considered impossible to photograph, and all the more remarkable owing to the difficulties inherent in underground situations, which in this case were greatly augmented.



line to Mammoth Cave, and lies through a picturesque country,—somewhat rugged, but more often rolling and well-cultivated farm-lands. Just half-way, and almost on a due line between Louisville and Nashville, we are dropped off at a small country village,—Glasgow Junction,—from which point a narrow-gauge road climbs up one side of a steep “knob,” and winds down the other,—successfully rivaling the antiquated stage-line,—and, after an hour's ride, lands us at our destination.

There is no settlement near the cave,—no habitation, in fact, except the great rambling hotel, which, little by little, has been evolved from the original log cabin. Located in a romantically beautiful country, this hostelry possesses all the comfort and simplicity of an old-time manor, and, aside from the attraction of the cave, is famous as a delightful summer resort.

According to geologists, the cavernous limestone of Kentucky covers eight thousand square miles of territory, Edmondson County alone, in which Mammoth Cave is located, boasting five hundred caves, although none approach the former's extent and proportions. This—acknowledged the largest cavern in the world—has been known since 1809, when, it is generally accepted, an entrance was accidentally discovered by a hunter in trailing a wounded bear to its hiding-place.

The first value placed upon the tract of two hundred acres, including the cave, was a modest one, as it changed hands in consideration of “\$40 and a mule.”

The estate subsequently passed into the possession of half a dozen different owners, and now belongs to the heirs of its last purchaser, Dr. Croghan. It is safe to add that while the property has grown to the extent of two thousand acres, its value has also increased since the original transaction. The Mammoth Cave estate, with the hotel, is under the management of Mr. H. C. Ganter, who extended to me every facility at his command, and whose interest and hearty co-operation made possible the success of so difficult an undertaking.

Finding it necessary to go over the ground carefully before a camera could be brought into service, I spent several days in preliminary exploration, and the first morning joined a party about to take the “Short Route.” For comfort and convenience most of the ladies donned the “Bloomer” costume, provided at the hotel, and, forgetting

its unconventional cut, we were soon reveling in the luxury of unimpeded movement. Equipped and ready, at the sound of a gong our little party is marshaled through the garden by the negro guide, who is to pilot us on our expedition.

No one enters the cave unaccompanied by a guide, there being an expert corps of perhaps half a dozen. These guides thread the bewildering intricacies of this labyrinth with the utmost ease and confidence, and many of them have won more than local celebrity by their daring explorations and knowledge of this underground country. Stephen Bishop, one of the earliest guides, was famous in his time, and his nephew, Eddie Bishop, is one of his capable successors. William Garvin, however, is the “dean of the corps,” having “guided” for twenty-nine years, explored much hith-

erto unknown territory, discovered many interesting points, and tramped for thousands of miles through these avenues and galleries.

Knowing the cave intimately, as one may say, William boasts also a varied learning, which includes something of the languages, geology, zoölogy, conchology, and “yarbs,” not to mention human nature. But his most striking accomplishment is the palming off on the unwary visitor, with great suavity and good humor, an endless array of jokes and puns, clever and funny enough to raise a laugh every time, but a few of which, I have a suspicion, William brought into the cave with him on his initial trip. All through my siege of the black depths with



PATHWAY TO THE CAVE.

photographic battery and flash-powder, William was my most trusted ally, and aided very materially in the ultimate success of the venture.

William is in charge this morning, and, in addition to a bunch of lamps all ready for use, carries an extra supply of oil, with a bag of Bengal lights, and other ammunition in the shape of oiled rags, for illuminating purposes. Through a gateway at the end of the garden we reach a steep, but charmingly picturesque, path, leading down the hillside and over a rustic bridge to the country roadway, crossing which, we find ourselves on a little platform of stone, facing the brink of a great, yawning chasm, to which there seems to be no way of descending, except to just fall in.

But as William advances, we discover a winding flight of rude stone steps, which disappear in the gloom beneath a



splendid arch formed of ledges of rock, over which are garlanded trailing vines and ferns and moss, in profusion. From the keystone a crystal stream falls with musical pattering, and, as if by magic, vanishes in the earth fifty feet below, giving us our first object-lesson, and suggesting the torrent which once surged through the cracks and crevices of the limestone, carving out, with velvet but resistless force, these marvelous subterranean passages.

The extent of this, the greatest of known caverns,—accepting the figures given by a State geological survey,—is estimated at hundreds of acres, through which wind two hundred and twenty-three avenues, with an aggregate length

William unfastens the lock of the iron-barred gate at the entrance, we are glad to turn back for a last glimpse of the entrancing picture formed by the trees, which, in a lace-like design of leaves and branches against the blue sky, with the gold of the sunlight over all, is framed by the grim and rugged outline of the cavern's mouth. Our momentary hesitation gives us a chance to discover that this is a breezy spot,—a strong air-current causing our scant skirts to flutter, and scurrying us with a rush beyond the prison-like portal, which closes again with a hollow clang, and is locked behind us. This is doubtless a very necessary precaution against interlopers and too venturesome explorers; but it



ENTRANCE TO THE CAVE.

of from one hundred and fifty to two hundred miles, and diversified by forty-seven domes, twenty-three pits, eight waterfalls, and several bodies of water, of which three are termed rivers, two are nominally lakes, and one, a sea. The avenues average twenty-one feet in height and width, and it is estimated that twelve million cubic yards of limestone have been displaced in their formation. The cave has five levels, the upper tiers being remarkably dry, while the drainage level, and consequent lowest depth, is placed at three hundred and twenty-eight feet below the surface.

Pursuing our way carefully down the mossy stairway, and following a well-worn path, we feel, submerged in the dim twilight, like a small horde of vandals stealthily invading the magic realms and treasure-houses of the gnomes and pixies. It is all so weird and uncanny, that, while

rather heightens the awesome effect of the chill air and the frowning rocks overhead.

The draught at the gate and this remarkable lowering of the temperature are a part of the curious phenomena of the cave, as the thermometer—with scarcely the fluctuation of a degree—stands at 54° the year round. Consequently the cave is said to “breathe outward” during the six months of the year when the outer temperature is higher than 54°, and to “inhale” the other six months, when winter sends the mercury zero-wards.

A little out of the violent draught William lights and distributes the lamps; and, pleased with our new accessories, we are about to forge ahead, when our first lesson is given on the importance of allowing our guide “to guide,” by William’s warning cry, “Danger overhead! Gar’ à la tête!”



This produces an instantaneous effect, and we all duck our heads to escape a ponderous mass of rock only an inch or two above us. William remarks sententiously, "It's 'g'inst the rules for visitors to knock out the ceiling with their haid," and, crestfallen, we are content thereafter to follow



THE IRON-BARRED GATE.

him meekly,—a spectral company, with trailing points of light from the lamps touching up our uncouth costumes.

The first landmarks reached are the old "Saltpeter Vats," which have historic interest, as, with the rudely constructed line of log pipes, the cart-ruts and oxen-tracks in the dirt floor, they are relics of the war of 1812, when the nitrous earth of the cave was worked for that important element of gunpowder, saltpeter.

Feeling already the exhilaration of the crisp, highly oxygenated air, we hang our wraps on the old pump frame, and, beyond the "Vats," enter the "Rotunda," a vast, circular apartment, which, when lighted by a flaming torch,—improvised from an oiled rag,—gives the first revelation of the possible magnitude of the cave. As the light flickers and then dies away, we again take up the line of march; and passing the entrance to "The Corkscrew," we find ourselves in a second great hall, which is called the "Methodist Church,"—"because," as our guide remarks with a kindred dryness, "it's a heap too dry for the Baptis'." Here, facing

this fine amphitheater, is a rude natural pulpit, hewn by living water out of solid rock, from which many a sermon has been preached, the usage, it is said, having originated with the miners, eighty years ago.

The "Gothic Galleries," brilliantly illuminated by Bengal lights, are the next points of interest, and constitute the natural theater of the cave, where, as tradition has it, Edwin Booth once delivered the impassioned eloquence of Hamlet.

Leaving the main cave at the "Second Saltpeter Vats," we ascend to a much higher level, by means of a wooden stairway, and enter "Gothic Avenue," one of the most remarkable passages of all this subterranean country. A niche near at hand is pointed out as the "Seat of the Mummy," where the bodies of a prehistoric woman and child are supposed to have once rested. While many relics of a former race,—such as sandals, cane-torches, and bits of rush matting,—have been discovered in Mammoth Cave, it is thought that these famous mummies were actually found in some neighboring and smaller cave.

Just beyond is the first stalactite pillar, called the "Post Oak;" and as the dim gallery broadens to ampler proportions, our way lies among great cairns of stone and rock piled about on every side. Found in all the well-traveled avenues of the cave, these cairns number several hundred, and frequently reach to the ceiling. They have been erected by tourists, as memorials to cities, States, countries, famous



LOOKING BACKWARD.



SALTPETER VATS OF 1812.

men and women, societies, and colleges. England, France, Kentucky, New York, California; Generals Grant, Lee, and other military heroes; Edison, our guide William, the W. C. T. U., Masons, Odd Fellows, the Greek-letter College Societies,—all are represented, and wherever your sympathies tend, thereto you straightway add a stone.

Noticing a neglected and undersized pile, which did not seem to have been well patronized, William



is questioned, and informs me it is "'The Old Maids' Monument,' miss!" As the stone placed at the apex of the little heap clattered again to the floor, he continued, "If it fall off, it's a shore sign yo' ain't gwine to be a ole maid, miss!"—whereupon, with hopes unexpectedly bolstered up, my interest is transferred to the ceiling, which is creamy and smooth as if it had once been kalsomined, but marred by names, dates, and rude designs, which fresco it in smoky black. This is called "Register Hall;" and in the days when candles were used for illumination, many visitors left their names in smoke upon these fine natural ceilings. In fact, the cave may be considered the largest known autograph album, for names are written on all smooth surfaces within reach; while visiting and business cards are tucked away in countless nooks and crevices, where they remain "for future reference," uninjured, and perfectly free from mold or stain, in the pure, dry atmosphere.

Passing the "Catcombs," which are curious, water-molded niches in the side wall, we come upon several stalactites, where, in one or two places, this immeasurably slow building is going on. Dripping from the suspended point the water falls to the smaller mass below; and if anyone is indiscreet enough to ask what causes the difference in the size of these formations, William is ready with the answer, "'Cause the top one's got the drop on the under one!"

In one spot near here, where for centuries the water has been slowly dripping from a crevice above, there lies on the floor, in high relief, a remarkably perfect human head. Eyes, nose, mouth, square chin, and rounded forehead—all are there; and William, turning the glare of his lamp upon it, announces, "And this is a man's head." There is always an innocent questioner to ask, "How do you know it is a man's head, William?"—to which the retort, "Don't you see, its mouth is shut!" is sufficiently convincing.

A short distance farther on, the way is apparently barred by a giant stalactite reaching from floor to ceiling, and appropriately named the "Pillars of Hercules." A nearer approach discloses a narrow defile through which we enter the "Bridal Chamber," one of the most famous features of the cave. Upheld at one end by the "Pillars of

Hercules," the roof is supported on either side by two fine stalactitic columns, "Pompey" and "Cæsar," and at the farther end stands the "Altar," a union of several irregular, but graceful, stalactites, lavishly decorated with natural scroll-work. The same peculiar formation encrusts the ceiling like a mass of ornate carving, and with the glow of a Bengal light tinging with rose tones each column and frieze, the effect is indescribable. It is said that before this natural altar nine couples have been married; and cave traditions tell the story of the pioneer subterranean bride, who, having pledged her mother that she would "never marry a man on the face of the earth," here fulfilled the letter, if not the spirit, of her vow, by an underground wedding.

The next object of interest is the "Arm-Chair," a magnificent stalactite reaching from floor to roof. Jenny Lind is reputed to have sat in this arm-chair, and, thus enthroned, to have given to the cave echoes the melody of her voice.

Stalactitic formations are marked characteristics of "Gothic Avenue;" and near the end, beyond the remains of a stalactite curtain, irreparably marred by early vandalism, are the "Elephant Heads," true to nature in every outline except that the trunks are wanting,—a defect accounted for by William's explanation, "Oh! they're checked!"

Passing under "Lover's Leap,"—a point of rock sharply jutting out over a black gulf,—and through a narrow way, we reach "Gatewood's



KENTUCKY'S CAIRN.

Dining-table," a huge, circular mass of stone, that seems to have dropped from "Napoleon's Dome," which curves above it.

Retracing our steps from this point, we again enter the main cave at the "Gothic Galleries," and passing under the "Grand Arch," several hundred feet long, sixty feet high, and fifty wide, encountering half-way the "Standing Rocks," we stumble along a pathway full of loose stones, to a deep crevice at one side, where we are informed we will hear the "Water-Clocks." We hold our breaths and listen. Distinctly comes the slow, measured "tick, tock," "tick, tock," of the one, and the rapid "tick tick," "tick tick," "tick tick," of the other. It seems impossible that the sound comes from the rhythmic dripping of a tiny stream into a pool below; and we turn reproachful glances



on William, who solemnly assures us that there is no trick. "It's water, sure 'nough,—but it ain't a eight-day clock, 'cause it runs down every twenty-four hours."

Passing "Wandering Willie's Spring," near the farther end of the "Grand Arch," is the cave "Menagerie." On the pale ground of the vaulting roof, in bold relief, are all manner of queer shapes, formed by the erratic crystallization of the blackened gypsum which encrusts the limestone ceiling. We make out, more or less distinctly, the forms of monkeys, cats, buffaloes, an ant-eater, a fat woman, and a well-defined giant and giantess seemingly playing a game of shuttle-cock with a ponderous infant in swaddling clothes.

The "Giant's Coffin" now looms in grewsome outline in the blaze of a Bengal light; and it is horribly realistic in its immensity, being forty feet long, twenty wide, and ten high.

Riveted to the spot by William's orders, we gaze into a region of blank nothingness, and listen to his crunching tread as he disappears, wondering what new surprise is in store. Suddenly a great cavity springs into light before us, and we are peering through a natural window, into "Gorin's Dome." This splendid chasm is said to measure over two hundred feet from pit to roof, and to cover an acre in extent. Shimmering with the water which trickles into a deep pool below, the walls are covered with folds of stalactitic drapery, so ornate and filmy in design, that in the brilliant but wavering light they seem to stir and tremble in the damp current breathed up from the depths. "Gorin's Dome" impresses us as the most marvelous of the natural wonders we have seen; and even as we look the lights die out, and it is lost again in absolute darkness.

William re-appears, and, with the wonder of it all grow-



THE BRIDAL CHAMBER.

Behind this we scramble down an incline to the "Deserted Chambers," and on the left find the entrance to "Ganter Avenue," which, by the engineering skill, persistency, and almost superhuman labors of the present manager (for whom it is named), has lately been opened, making the more remote avenues of the "Long Route" accessible and absolutely safe when the lower passages are cut off by the rising waters of the subterranean rivers.

Down the "Steep of Time," past "Richardson's Spring," we come upon the first of the series of domes and pits peculiar to this region. "Side-Saddle Pit," so called on account of the shape of the rocky ledge, nearly underlies "Minerva's Dome;" and after watching the lighting up of its rugged sides and black depths, we resume our march, climbing up stairs and down stairs, in and out, through the mazes of the "Labyrinth," until we reach a small round opening in a seemingly solid wall.

ing upon us, we retrace our way through the "Labyrinth," to "Shelby's Dome" and the "Bridge of Sighs." Here the danger of any attempt to trust to our own guidance is forcibly demonstrated by the flight of a ball of flame over the railing of the bridge, which reveals that we are suspended over an awful abyss called the "Bottomless Pit," though in reality it has a bottom a hundred feet below. To insure perfect safety, this bridge is renewed every few years.

Passing through "Reveler's Hall," we wander down "Pensico Avenue," and beyond the "Sea Turtle" enter "Wild Hall," where masses of broken rock litter the floor and crop from the walls in indescribable confusion. "Wild Hall" might well be termed the "Torture Chamber," for arches, walls, and ceiling, all seem on the verge of falling to crush the rash intruder,—a groundless fear, as no stone has fallen here within the knowledge of man.

Through "Snowball Arch," where gypsum, thick and



white, encrusts the ceiling, we reach "Grand Crossing," where a gallery on the tier above has broken through its own floor to the lower level, showing a new feature of the construction of the cave.

There are many other points beyond to claim our interest, but time is pressing, and we turn on our steps once more, and re-enter the main cave at the "Giant's Coffin." A few hundred yards beyond, the main cave doubles sharply on its former trend, at the "Acute Angle," and in this vicinity we find two little huts, rudely built of the cave limestone, which have a melancholy history.

The miners who once worked the nitrous earth were known to have grown healthy and robust, and, in 1843, a little company of fifteen persons, in the last stages of consumption, formed a settlement here, in the hope that the favorable conditions of even temperature, dryness, and the oxygenated air, might check the fatal ravages of the disease, and give them one last chance for life. Actually buried alive, this spectral colony lived in their roofless cottages for five months, clinging to their pitiful delusion, and learning nothing from the poor plants which they attempted to grow, but which drooped and died for lack of sunshine,—just as they themselves were fading away. The climax of this strange tragedy came swiftly when one of the number gave up the struggle and died, and with his life the light of their hope went out. Then began a mad rush for the living, beautiful world outside; but Death ran too swift a race, and it is related that three more died before they could reach the entrance, and all the rest



THE ARM-CHAIR.



ELEPHANT HEADS.

succumbed within three days. In a tangled, overgrown patch on a gentle knoll, and underneath stones that are gray, moss-covered, and crumbling, some of them lie at rest, with no epitaph to tell of their strange story and their stranger fate.

With thoughts saddened by this recital, a few paces farther on we obey William's request to sit still on some convenient benches, watch the ceiling, and wait until he comes back. Gathering up all our lamps, a hole in the wall swallows him up; and as the last ray of light is obliterated there falls upon us a blackness so absolute, leaden, tangible, that we are almost terrified by it. But a moment since, the brisk air stimulated us: now our breathing is oppressed and labored, and in the death-like silence we can count our heart-beats. In this dragging second of time the horror of the curse of darkness is revealed to us, and we are taught the ineffable blessing of light. Even while gazing into the





ONE OF THE LIMESTONE HUTS.

gloom, the grim tension is loosened, and we are held enraptured by a vision overhead. A myriad stars have sprung into the clear, calm vault above, and we breathe free again,

—for this is no illusion. By some spell, the radiant serenity of a cloudless summer night is over us; yet even as we look, the sky is no longer cloudless, but overcast by heavy shadows which veil the stars, and finally blot them out. Again we are left in darkness, but, little by little, a faint, rosy light creeps up in the east; the bleating of sheep and the lowing of cattle suggest that dawn is coming and the world is waking up; a dog barks a saucy reveille, and the sun appears in a flood of glory: likewise does William, who is a natural ventriloquist, swinging his bunch of lamps. This is the wonderful illusion of the “Star Chamber,” one of the most remarkable incidents of the trip, and is produced by a deft manipulation of the clustered lights, which are thrown upward, from a hidden side-passage, over the mass of starry gypsum crystals incrusting the ceiling.

Beyond this storehouse of magic, in the main cave, are many other points of unusual interest, such as “Proctor’s Arcade,” “Wright’s Rotunda,” the “Black Chamber,” and “Chief

City;” but we have tramped seven miles, and spent many hours in our explorations, so must now turn homeward. We make one more stop, however, to see a very ingenious



GIANT'S COFFIN.





SCOTCHMAN'S TRAP.

and beautiful optical illusion, which William—as the discoverer—takes great pride in showing. Halting his party, William goes on ahead, and, after a few moments, we hear a shout. Looking in his direction, we see, standing upon a well-defined pedestal, against a background of velvet blackness, a figure apparently fashioned from translucent crystal. This is “Martha Washington’s Statue,” and it is nothing but the outline defined by a vivid light which William has fired behind a jutting ledge. This is the last display of our present exploration; and a brisk walk brings us to the entrance, and on to the hotel, where, while discussing the appetizing menu of a real country supper, we eagerly recall the experiences of our first trip.

Early the next morning, refreshed and ready for new adventures, we fall in with another party proposing to take the “Long Route,”—an excursion of some eighteen miles, to the more distant avenues and passages,—which requires eight or ten hours to accomplish.

Following the main cave, as yesterday, we leave it at the “Giant’s Coffin,” and crossing the “Bottomless Pit” into “Reveler’s Hall,” turn off to the left, and through the “Valley of Humility” come upon “Scotchman’s Trap,” a huge slab of rock caught only by a frail ledge, and overhanging the black hole through which we must descend. Its fall seems imminent enough to scare even a canny Scot; but, accepting the risk, we soon find ourselves in a pretty tight place. “Fat Man’s Misery” is exactly what its name conjures up,—so narrow, low-roofed, and tortuous, that even the most slender of us find ourselves breathless as we bow still lower in “Tall Man’s Tribulation,” and emerge with thankfulness into “Great Relief.”

Before entering “River Hall” we pass an alcove called the “Bacon Chamber,” where the water-worn rocks hang suspended from the roof like so much bacon in a smoke-house. Beyond this we cross the cliffs overhanging the “Dead Sea,”—a sluggish pool,—and descending a flight of

stairs reach a cascade which is supposed by some to be the re-appearance of the fall of water at the entrance. Crossing the “River Styx” by the “Natural Bridge,” we follow a narrow path skirting “Lake Lethe,” which is spanned at one point by a pontoon bridge leading to the “Great Walk.” This is a long, ample passage, floored by the finest yellow sand, and is really a deserted river-bed, which becomes submerged at times when the water rises in the lower level.

A cautious search in these dark, pellucid pools reveals the eyeless fish inhabiting their depths. Like everything else living in this subterranean world, they are a dingy white, and so transparent that their interior structure is easily traced. The study of cave-life has proved an interesting one to scientists, who have discovered several species of fish, crawfish, flies, crickets, spiders, worms, *infusoria*, and among plant life, mushrooms and various other fungi.

At the end of the “Great Walk” we come upon “Echo River,” and find its rude fleet safely moored and ready for our voyage. These ungainly craft are brought piecemeal through the tortuous passages, and put together inside the cave; but they are well-built and quite safe. Embarking

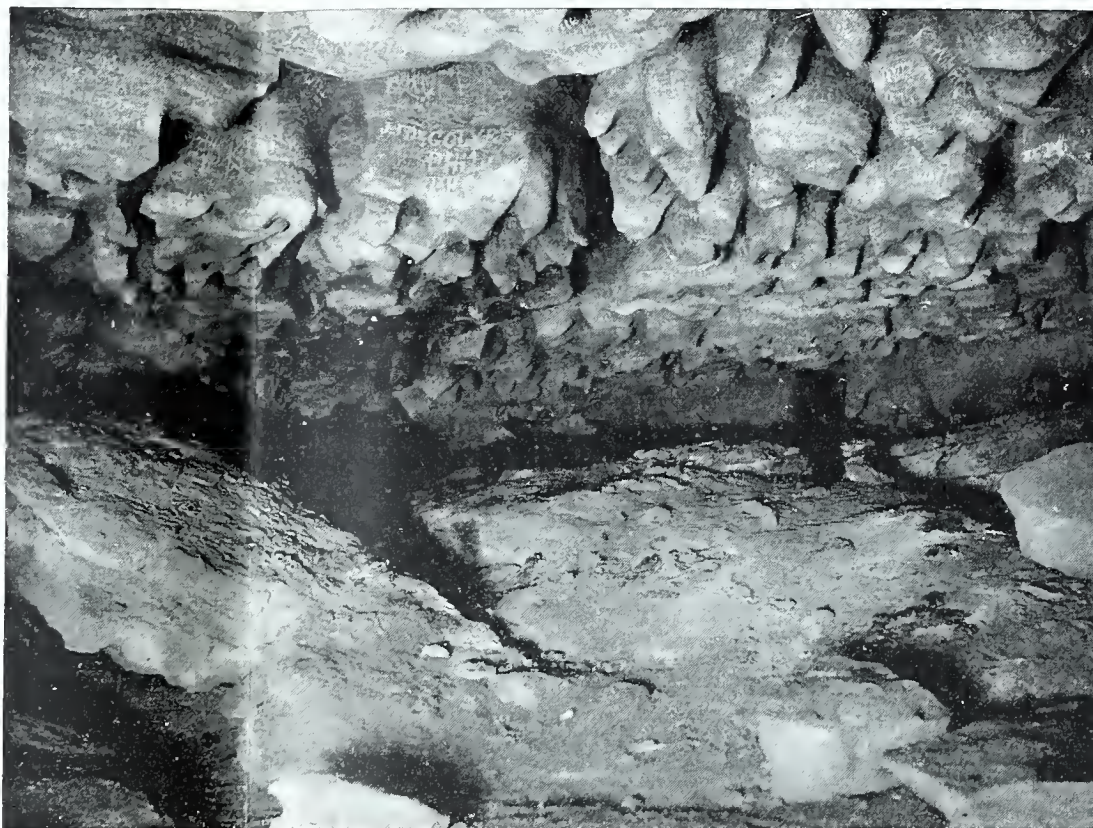


FAT MAN'S MISERY.

cautiously, the arch before us hangs so low that for a few yards we are forced to crouch almost to the level of the gunwale, until the roof springs up in a majestic vault and enables us to note the details of our surroundings. Lit up by the warm glow of many Bengal lights, with the unearthly, beautiful music of its echoes vibrating about us, the sail upon “Echo River” is the most thrilling and impressive of all adventures in the cave.

Nothing equals the echo, which has the power and resonance of the finest organ, combined with the melody and





BACON CHAMBER.

sweetness of a choir of voices. It is not possible to adequately describe the full chords which reverberate and float back to us from dim recesses over the still waters; and we are constrained to sit dumb and motionless under the spell of these fairy harmonies. Our boat-ride is all too short, but the long journey before us hastens us onward.

Landing in "Silliman's Avenue," we brave the terrors of the "Infernal Regions,"—where William shows us a "lost sole,"—and enter "Serpent Hall," with which "Ganter Avenue" connects by a roundabout way from the higher levels. Leaving "Valley Way Side Cut" and climbing the "Hill of Fatigue," we round the bulky stern of the "Great Western," and are rejoiced to find our luncheon neatly spread on an improvised table of rock, the guides having brought it in baskets, and supplied us with water from a neighboring spring. In our two days' trip we have grown used to the impressiveness of our surroundings, and make a very merry meal in what might have been an ogre's banquet-hall.

Rested and refreshed, we again take up our journey, passing through "Ole Bull's

Concert-Hall," where that master's music once resounded, and enter a wild and rugged gorge, the "Pass of El Ghor." Here we find the "Fly Chamber," where the gypsum incrustations on the roof look like swarms upon swarms of that household pest.

Farther on, a mighty stone in falling was caught between narrowing ledges and held suspended. "Suicide Rock," announces William. "You see,"—confidentially,— "it hung itself." Passing under the "Sheep-shelter" we come upon "Queen Victoria's Crown," and after leaving "Corinna's



EXIT OF ECHO RIVER ON THE SURFACE.



Dome," inspect the "Black Hole of Calcutta." At the end of the gorge, by "Hebe's Spring," we scale a ladder, and, one by one, creep through a hole in the roof, which lands us on the level above, and we discover "Martha's Vineyard," where bunches of grapes cluster thickly on the branches of a well-defined vine.

Through "Washington Hall" and the "Snowball Room" we enter "Cleveland's Cabinet," and here find the most beautiful and marvelous of all the gypsum incrustations,—a bewildering profusion of crystalline blossoms, so perfect, so varied, so abundant, that no favorite among all the flowers is missing. Shining in a crimson light, it seemed as if Dame Nature had showered down, in a frozen,

snowy mass, all the dead roses and lilies which had died in the chill winds above. In one place lies imbedded a

cross of flowers, perfect in form and outline, and this fairy-like decoration adorns the archway for nearly two miles.

At the end is a weary climb over the "Rocky Mountains" and through "Dismal Hollow," but we enter "Croghan Hall" in triumph, having reached the termination of the "Long Route." Here William lights up the fearful depths of the "Maelstrom," and, after a brief halt, we settle down to the work of retracing our steps.

After crossing the river, the return journey has no incident but the exciting transit through the "Corkscrew." This nearly impassable cranny is just over the "Bacon Chamber," and winds and twists upwards for fully two hundred feet, into the main cave, several stories above. Climbing a series of ladders, crawling through



ON ECHO RIVER.



LUNCHING IN THE CAVE.





THE CORKSCREW

crevices, and scrambling over boulders, we emerge, breathless and disheveled, but happy in the consciousness that we have saved two miles of travel, and have also escaped the discomforts of "Fat Man's Misery." From the "Corkscrew" the mouth of the cave is soon reached, and, on emerging, we experience the oddest sensation of the day,—finding the stars shining and the moon supreme where we had left the sun in full glory.

Many excursions to points not often visited followed the first explorations, each succeeding visit revealing new and beautiful features, till I thoroughly realized that the half has never been told—possibly is not known—of the wonders, the immensity, the grandeur, of this weird and marvelous place in the depths of the earth. Its fascinations grow upon one, and engender a spirit of adventure and a longing to be the discoverer of new marvels and beauties.

As to the difficulties, disasters, but ultimate triumph, of the photographic campaign, when I sought to vanquish the arch-enemy darkness with flash-powder, it is too long a story. Forgetting many weary, and often fruitless, trips, in the success that I hardly hoped to achieve, I am happy to give to the readers of "Demorest," not only personal, but photographic, impressions of one of the natural wonders of the world,—“The Mammoth Cave.”

FRANCES BENJAMIN JOHNSTON.

## How to Reach Mammoth Cave.

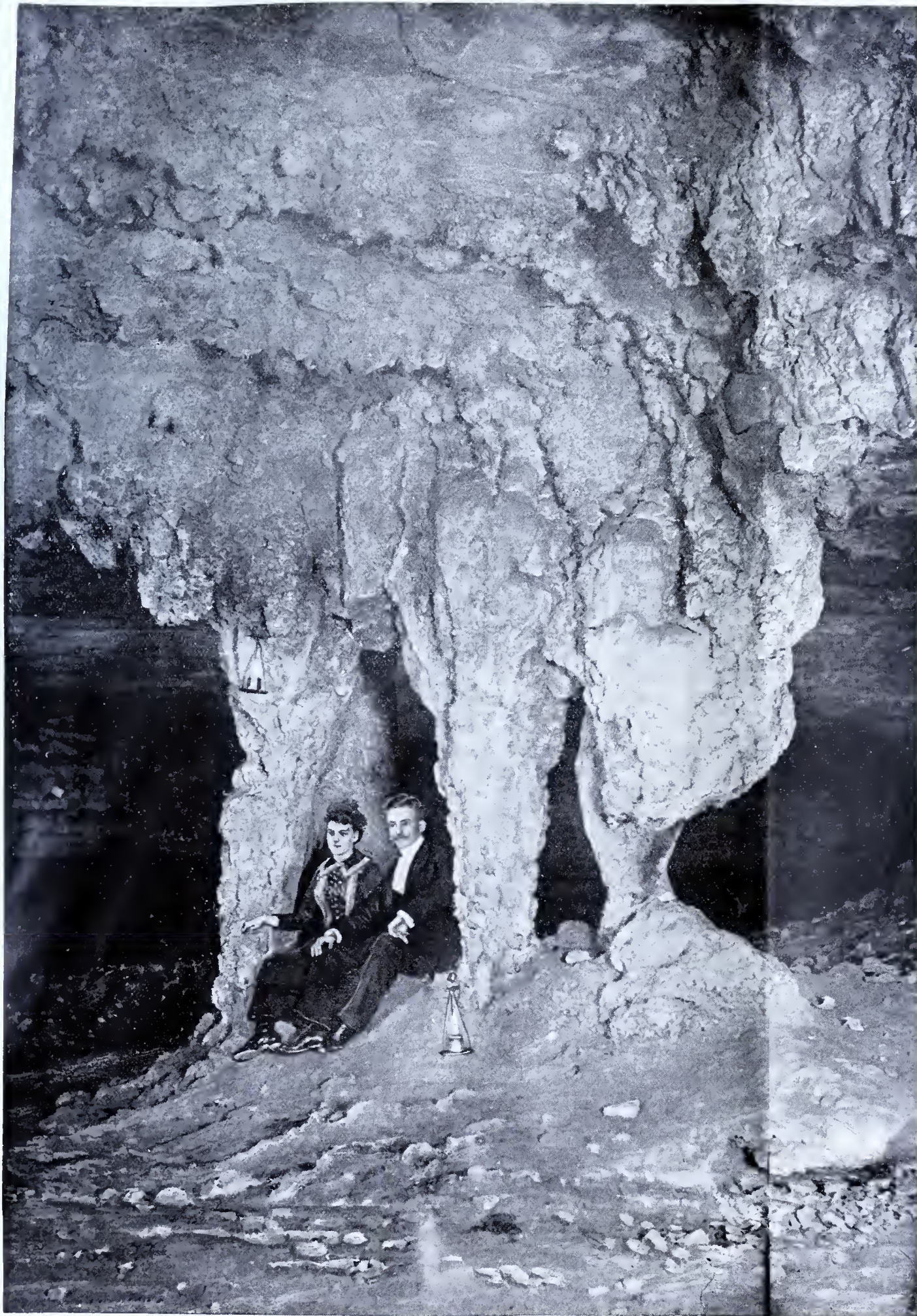
Mammoth Cave is in Edmonson County, Ky., nine miles from the Main Line of the Louisville and Nashville Railroad, and is reached by the Mammoth Cave Railroad, which forms connection with the Louisville & Nashville Railroad at Mammoth Cave Junction, ninety miles south of Louisville.

To make direct connection from Chicago and the North, take train arriving in Louisville to connect with the Louisville & Nashville Railroad train leaving Louisville at 7.45 A.M. or 4.15 P.M.; trains on Mammoth Cave Railroad make direct connection with these trains, putting passenger at Mammoth Cave Hotel for dinner or supper respectively.

Straight and round-trip tickets are on sale at all times at Louisville & Nashville Railroad stations, and reduced rates are made for parties of ten or more.

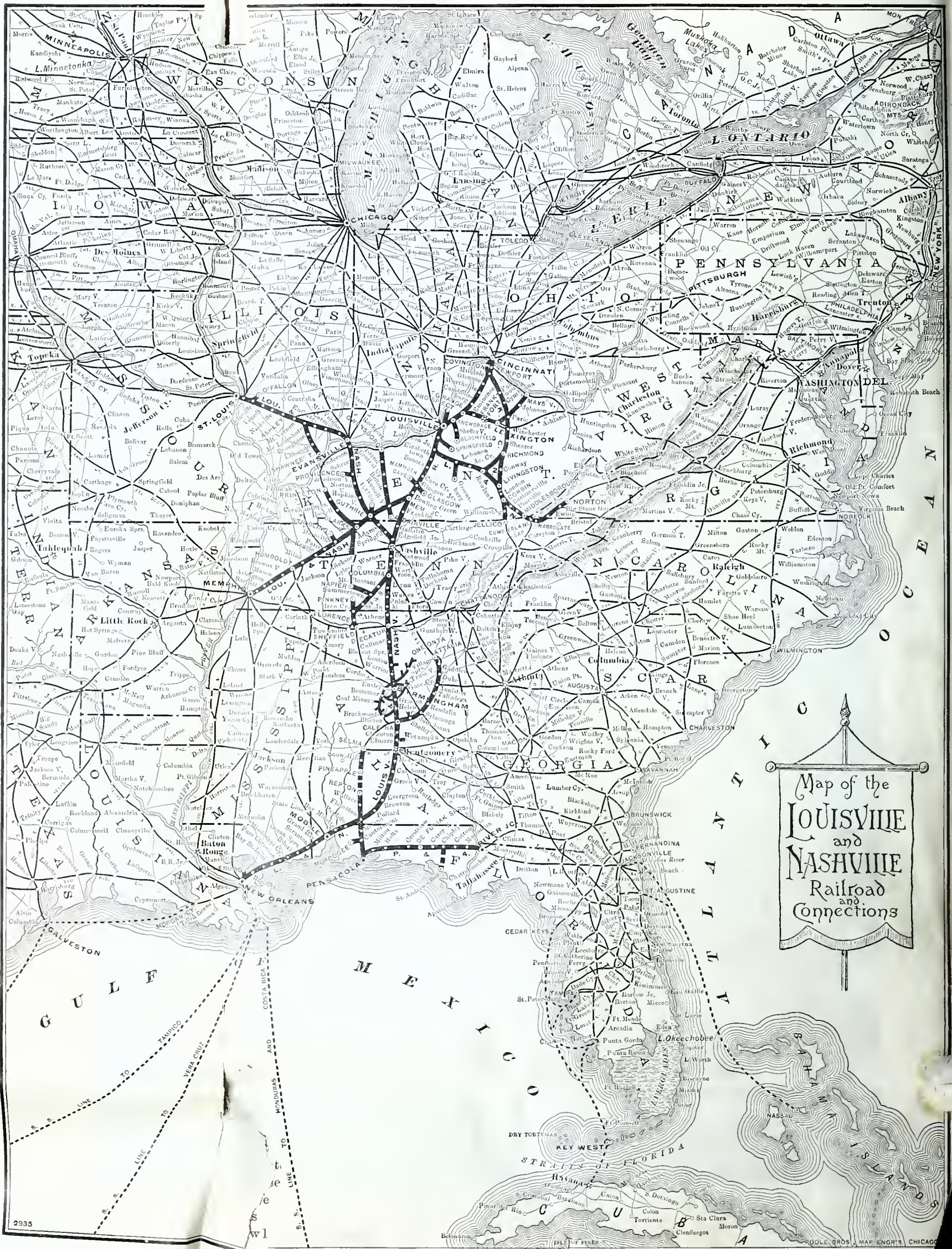
Special round-trip rates have been arranged from Chicago for the accommodation of tourists and others visiting the World's Fair. To secure these rates from Chicago, or any additional information, please call on agents of the Pennsylvania or Monon Lines, or Mr. GEO. L. CROSS, Northwestern Passenger Agent, Louisville & Nashville Railroad, Room 6, Rookery Building, Chicago, Ill.





THE BRIDAL ALTAR.





Map of the  
LOUISVILLE  
and  
NASHVILLE  
Railroad  
and  
Connections